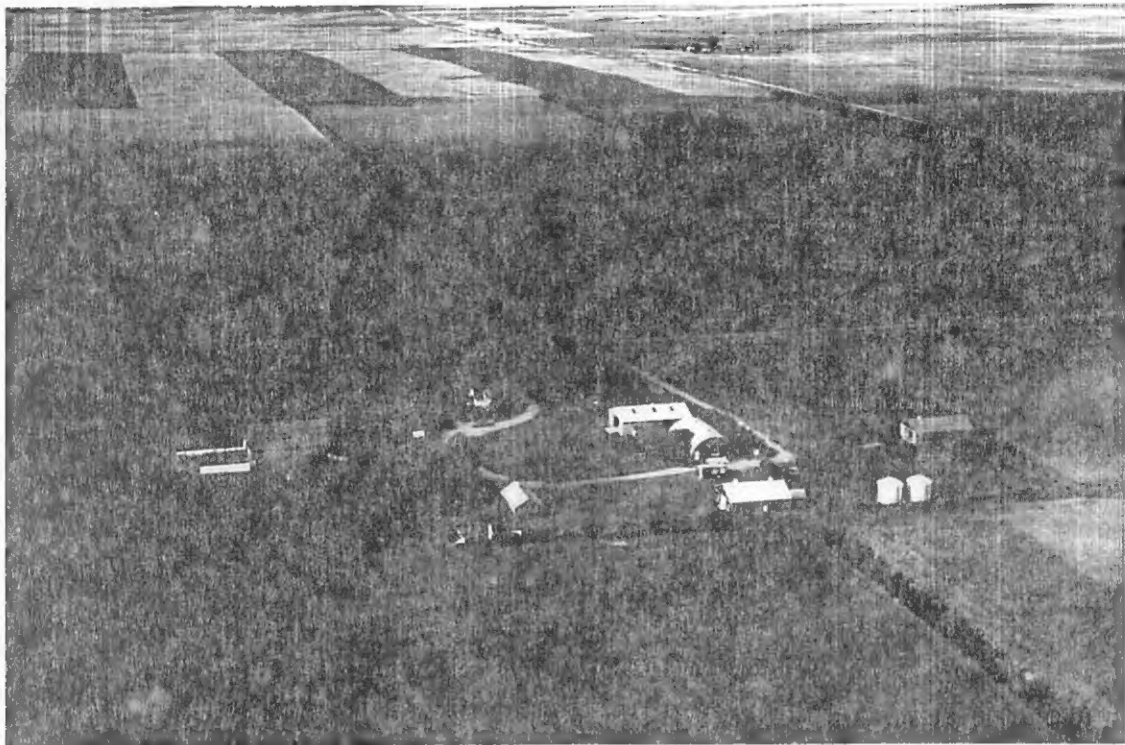


On their farm in the St. Lawrence Valley, this French Canadian family kneels beneath the mid-day sun to pray.



Dr. R Raymond Green MD
375 E 200 N
Heber City, UT 84032



Grant Hellman

The Vast Farmlands of the United States are among the most productive in the world. Efficient management and the use of much labor-saving machinery help to account for the high productivity.

FARM AND FARMING

FARM AND FARMING. Farming is the most important occupation in the world. People cannot live without food, and nearly all the food they eat comes from crops and livestock raised on farms. Various industrial materials, such as cotton and wool, also come from plants and animals raised on farms.

Farming was once the chief way of life in nearly every country. For example, the typical American family of the 1700's and early 1800's lived on a small farm. The family raised cattle, chickens, and hogs and grew corn, fruits, garden vegetables, hay, and wheat. Everyone in the family worked long and hard, but the results were often disappointing. Most families produced barely enough food for themselves. This situation began to change during the last half of the 1800's—and it has changed remarkably during the 1900's.

Scientific advances since the 1800's have made farming increasingly productive. The development of better plant varieties and fertilizers has helped double and even triple the yields of some major crops. Scientific livestock care and breeding have helped increase the amount of meat that animals produce. At the same time, the use of tractors and other modern farm machines has sharply reduced the need for farm labor.

Farming is no longer the chief way of life in countries where farmers use scientific methods and labor-saving machinery. In these countries, farmers produce more food than ever before, and most of the people live and work in urban areas. These changes have occurred in all industrialized nations and have been dramatic in the United States. In 1850, each farmer in the United States produced, on the average, enough food for 5 persons. Most Americans lived on farms. Today, each farmer produces enough food for nearly 60 persons, and only 4 per cent of all Americans live on farms. But even with the great decrease in the number of farmers, the nation's farms produce more food than the American people use. The surplus has enabled the United States to become the world's chief food exporter. About a sixth of all food exports come from American farms.

As farming has become less important as a way of life in the United States, it has become more and more important as a business. The successful farmers of today are expert not only in agriculture but also in accounting, marketing, and financing. Farms that are not run in a businesslike way have great difficulty surviving.

This article deals mainly with farms and farming in the United States. It discusses the various kinds of U.S. farms and the methods that American farmers use to raise crops and livestock scientifically. The article also discusses farming as a business. Much of the information about American farming also applies to such countries as Canada, Australia, and New Zealand. For information about farming in other countries and about the history of farming, see AGRICULTURE.

Lester V. Boone, the contributor of this article, is an agronomist at the University of Illinois at Urbana-Champaign.

Farms in the United States can be divided into two main groups: (1) specialized farms and (2) mixed farms. A specialized farm concentrates on a particular type of crop or livestock. A mixed farm raises a variety of crops and livestock.

Specialized farming is profitable only if there are large commercial markets for farm products. The United States had few such markets before the late 1800's because the majority of the people lived on farms and raised their own food. Most U.S. farms, therefore, were mixed farms. Specialized farming was important mainly in the South. Unlike the North, the South has a long enough *growing season* (frost-free period) to raise such warm-weather crops as cotton, rice, and sugar cane. The North provided a large commercial market for these products, and many Southern farmers specialized in raising them.

The surpluses from mixed farms could feed the relatively few people who lived in U.S. cities and towns before the mid-1800's. But the urban areas began to grow rapidly during the last half of the 1800's, creating a demand for larger and larger food supplies. Farmers started to meet the demand by specializing. During the 1900's, specialized farms have increased at nearly the same rapid rate as the population of U.S. cities and towns. Today, about 95 per cent of the nation's farms are specialized farms.

Specialized Farms

Farmers who practice specialized farming raise the kind of crop or livestock that is best suited to their region. For example, corn is often the most profitable crop to grow in regions that have level land, fertile soil, and a warm, moist growing season. Wheat grows best in a drier and somewhat cooler climate. Dairy farming is often the most profitable kind of farming in regions with rolling land, rich pastures, and a short growing season. Much of the western half of the United States is too dry for any crops to grow without irrigation. But the West has vast grasslands, which farmers use to graze

beef cattle and sheep. Irrigated farms in the West specialize in such crops as citrus fruits, cotton, rice, or vegetables. For more information on how soils and climate influence the kinds of crops and livestock that a farmer can raise, see *AGRICULTURE* (Agriculture Around the World).

In the United States, a farm is classed as a specialized farm if it earns more than half its income from the sale of one kind of crop or livestock. Many specialized farms raise other products in addition to their main one. Numerous crop farms, for example, also raise livestock, and many livestock farms also raise crops.

Specialized Crop Farms make up about 50 per cent of all the farms in the United States. Most of them raise *field crops*. Field crops are crops that must be grown on a relatively large amount of land to be profitable. They include nearly all crops except nuts and most vegetables and fruits. Nuts and most vegetables and fruits have a higher market value than do field crops. They may therefore be raised profitably on as little as 1 to 2 acres (0.4 to 0.8 hectare) of land. However, such vegetables and fruits as potatoes and pineapples must be grown in large fields to produce a crop big enough to be profitable. They are thus classed as field crops.

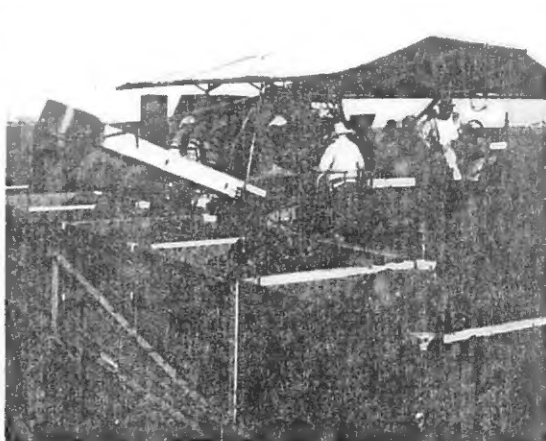
The most important field crops are *cereal grains*. Foods made from grain make up a large part of the American diet. In addition, grain is a major ingredient in livestock feed, and so it is essential to large-scale egg, meat, and milk production. The chief cereal grains grown in the United States are, in order of value, corn, wheat, sorghum, rice, barley, oats, and rye. Farmers raise these crops either to sell or to feed to their livestock. A farm that concentrates on raising grain for sale is called a *cash grain farm*.

Cash Grain Farms mainly raise cereal grains. However, farms that specialize in dry field beans, dry peas, or soybeans are also considered to be cash grain farms. These crops are *legumes* (members of the pea family), not grains. But they are grown much like cereal grains and, in many cases, on the same farms.



Mississippi Agricultural and Industrial Board

A Mechanical Cotton Picker, above, can harvest as much cotton as 80 workers picking the crop by hand. Farms throughout the southern half of the United States grow this important crop.



Grant Heilman

Vegetable Farming uses both machines and hand labor. This machine on a California tomato farm cuts and gathers tomato plants. Workers then remove the tomatoes from the stems by hand.

Some cash grain farmers raise dry field beans, dry peas, rice, sorghum, or soybeans as their principal crop. However, most cash grain farmers specialize in corn or wheat. The majority of the nation's wheat farms are in the Great Plains region and the Pacific Northwest. Most farms that specialize in corn are in the Midwest and the South. Wheat is the only cash crop that most farmers in the Great Plains region grow. But in sections of the plains that have enough rainfall, many wheat farmers raise a secondary cash crop of corn or sorghum. Many corn farmers grow another grain or soybeans as a secondary cash crop.

Other Field Crop Farms specialize in such crops as cotton, peanuts, pineapples, potatoes, sugar cane, sugar beets, or tobacco. All the cotton and peanut farms in the United States are in the southern half of the nation. Farms in Hawaii produce all the nation's commercial pineapple crop. California and the states that border Canada, especially Idaho and Maine, have most of the potato farms. Sugar cane is grown in Florida, Hawaii, and Louisiana. Farms in various parts of the country specialize in sugar beets. Most of the tobacco farms are in the South.

Vegetable Farms raise such produce as cucumbers, green beans, lettuce, sweet corn, and tomatoes. Many of these farms grow only one kind of vegetable. Most vegetable farms are relatively small, but some cover 2,000 acres (810 hectares) or more. About half the nation's vegetable farms are in seven states—California, Florida, Michigan, New Jersey, New York, Texas, and Wisconsin.

Fruit and Nut Farms concentrate on raising tree fruits, berries, grapes, and nuts. Tree fruits are the most common fruit crops by far. These fruits include apples, cherries, citrus fruits, peaches, pears, and plums. Most fruit and nut farms raise only fruits or nuts. Many of them specialize in one crop, such as grapes, oranges, or pecans. About three-fourths of the farms are in five states—California, Florida, Michigan, New York, and Washington.

Other Specialized Crop Farms raise flowers, nursery products, or forest products. Flower farms and nurseries are found throughout the United States. About half the farms that specialize in forest products are in the South.

Specialized Livestock Farms account for about 45 per cent of all U.S. farms. They can be divided into three main groups: (1) beef cattle, hog, and sheep farms, (2) dairy farms, and (3) poultry farms.

Beef Cattle, Hog, and Sheep Farms produce most of the nation's meat animals. The majority of the farms specialize in one kind of animal. In the eastern half of the United States, many livestock farmers raise crops to feed their animals. However, most livestock farmers in the western half of the nation engage in ranching—that is, they graze beef cattle and sheep on rangeland.



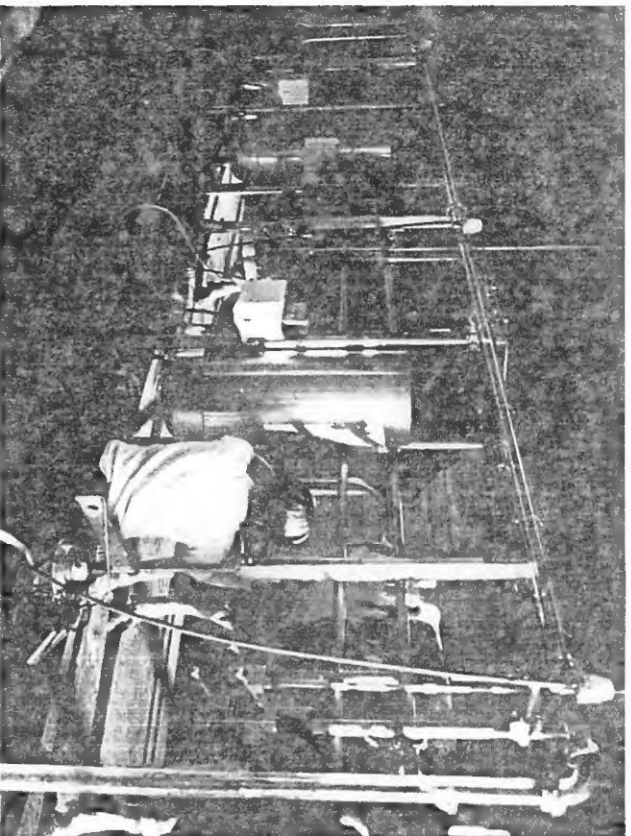
Milt and Joan Mann

An Orange Picker in Florida is one of thousands of workers hired by U.S. fruit farms each year at harvesttime. Fruits bruise easily, and so they are harvested mainly by hand.



Nicholas deVore III, Bruce Coleman Inc.

Cattle Ranching is the main type of farming on the Western grasslands of the United States. This Montana ranch has fairly rich grazing land. Many other ranches are located in dry regions of the West. They must cover a huge area to provide enough grass for large numbers of cattle.



Grant Heilman

Machines Milk Cows in a milking parlor, left. The majority of U.S. dairy farms use milking machines. Because it is expensive to ship milk great distances, most large dairy farms are located near big-city markets.

Most of the rangeland is dry. In many areas, a rancher needs as many as 125 acres (51 hectares) of land to provide enough grass for one animal. A ranch must therefore cover a huge area to make a profit. Ranches are by far the largest kind of farm. They average nearly 3,350 acres (1,356 hectares) in size, and some cover 40,000 acres (16,000 hectares) or more.

Dairy Farms specialize in raising milk cows. Most of the farms are concentrated near big-city markets. Many dairy farmers buy all or some of the feed they require

from commercial suppliers. However, farmers in the Northeast and the Great Lakes region have large areas of pastureland that are ideal for the grazing of dairy cattle. The two regions have long been the nation's chief centers of dairy farming.

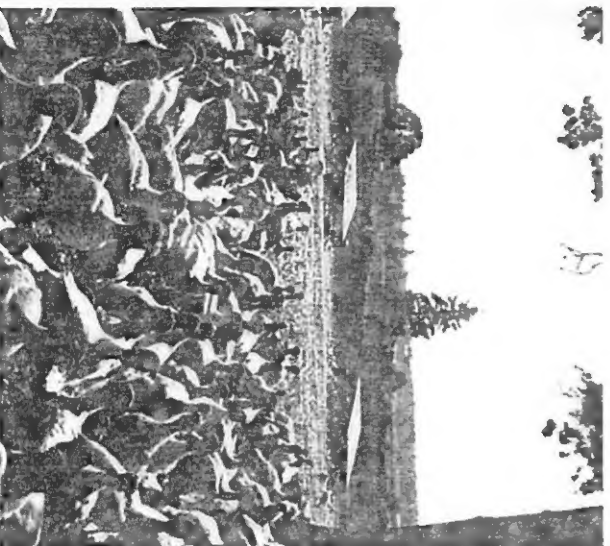
Poultry Farms raise chickens, turkeys, and other poultry for meat. They also raise laying hens for eggs. Most of the farms specialize in broiler chickens or eggs. The broiler industry is centered in the South. Egg farms are scattered throughout the country. Nearly half the poultry farms grow no crops. The great majority of poultry farms buy most or all of their feed.

Other Specialized Livestock Farms raise horses, mules, goats, rabbits, minks, chinchillas, bees, or fish. Usually, only *domesticated* (tame) animals are regarded as livestock. Minks, chinchillas, bees, and fish are not domesticated. But farms that raise them are often classed as livestock farms.

Farmers raise horses mainly for riding and racing. They raise mules to be work animals. Goats are raised for milk and wool, and rabbits for meat and fur. Farmers raise minks and chinchillas for their valuable fur. They keep bees for honey. Fish farms produce food fish, especially catfish, pompano, and trout. Farmers raise the fish in ponds and use special feeding methods to make the fish grow bigger and faster than they grow in the wild.

Mixed Farms

About 5 per cent of the farms in the United States produce a variety of crops and livestock. These mixed, or *diversified*, farms differ greatly from the mixed farms of the 1700's and 1800's. Like specialized farms, today's mixed farms are operated for profit and raise the kinds of crops and livestock that are best suited to their region. In the Midwest, for example, the typical mixed farm raises beef cattle, hogs, and cash grains. The typical mixed farm in the South produces beef cattle, peanuts, and tobacco.



Ray Atkinson, DPI

Poultry Farming requires relatively little land—about 70 acres (28 hectares) for a typical farm. Most poultry farmers buy the grain to feed their birds. This farm in Oregon raises turkeys.